

Section-6

② Difference between synchronous and asynchronous sequential circuits.

Key	Synchronous sequential circuits	Asynchronous sequential circuits
Definition	Synchronous sequential circuits are digital sequential circuits in which the feedback to the input of next output generation is governed by clock.	on other hand Asynchronous sequential circuits are digital sequential circuits in which the feedback to input for next output.
Memory unit	In synchronous sequential circuits the memory unit which is being get used for governance is clocked flip flop.	on other hand unclocked flip flop or time delay is used as memory element in case of
state	The states of synchronous sequential circuits are always predictable and thus reliable.	on other hand there are changes for the asynchronous circuits.

to enter into a wrong state because of the time difference arrival of inputs. This is called as race condition.

example

Synchronous circuits are used in context shift Register memory units.

on the other hand Asynchronous circuits are used in low power and high speed operation such as simple microprocessor digital single and in systems.